

### **REMARKS/ARGUMENTS**

Reconsideration of the rejections set forth in the Office Action dated November 9, 2004 is respectfully requested. Claims 1-9, 11-13, 39-48, and 50-52 are currently pending. Claims 1-9, 11-13, and 47 have been allowed. Claims 39-46, 48, and 50-52 have been rejected.

Claim 48 has been amended for clarity.

Throughout the rather extensive prosecution history of the instant application, the Applicants have been frustrated and sincerely puzzled as to why the Examiner continues to insist that the Applicants have admitted that in order for scanning to take place, two couplers are needed, despite the Applicants' repeated attempts to correct the Examiner's misconception. It is respectfully submitted that the Examiner has never given the Applicants' explanations **any** consideration, as he does not address many of the explanations.

Contrary to the Examiner's repeated inaccurate understanding, the Applicants have never stated that two couplers are needed to perform scanning. The Applicants have stated that "The use of two couplers allows scanning, *e.g.*, acceleration of a first stage, in two directions along an axis to benefit from the use of the couplers (Specification, on from page 14 at line 27 to page 15 at line 3)." This is an inventive aspect of the present invention, and in no way have the Applicants made a generic statement that two couplers are in any way always needed for scanning to occur. **If the Examiner can indeed point out exactly where and when such a statement about "need" was made by the Applicants, the Applicants would respectfully request that the Examiner bring such a statement to their attention.** It is submitted that the term "allows" in no way implies an inherent need.

The Applicants state in the Specification that their inventive use of two couplers allows scanning to occur in two directions along an axis to benefit from the use of couplers. Hence, the

inventive use of two couplers does indeed allow or permit scanning to occur, although contrary to the Examiner's repeated inaccurate statements, the use of two couplers is not needed or required for any/every scanning apparatus to function. As such, the use of two couplers is not inherent to Asano, as argued by the Examiner.

**The Applicants note that even, solely for the sake of argument, if the statement "The use of two couplers allows scanning..." does somehow imply that two couplers are necessary for scanning (which is not believed by the Applicants to be the case), such a statement would apply only to the embodiments of the invention, as the statement "The use of two couplers allows scanning..." is made in the Detailed Description of the Embodiments section of the instant application, which describes embodiments of the invention.** No such statement is made in the Background of the Invention section, or when any prior art is characterized. When such a statement was made in the previously filed amendments, it is noted that such statements were made in support of the claims, and apply ONLY to the claimed invention.

#### Rejections Under 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 48 and 50-52 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Doran et al. (U.S. Patent No. 5,585,629), herein after Doran. Claims 39-46 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Doran in view of Toshiya Asano (JP 2000223410), herein after Asano.

#### *1. Independent Claim 48 and its dependents*

Claim 48 recites a stage apparatus that includes a first assembly, a second assembly, and a second actuator. The first assembly includes a first stage and a first actuator, and the second assembly includes a second stage. The second actuator is arranged between the first stage and

the second stage. When the first actuator moves the first stage along a first axis, the second actuator is arranged to apply a force to the second stage to substantially control acceleration of the second stage.

It is respectfully submitted that contrary to the Examiner's assertions on page 2 of the Office Action dated November 9, 2004, Doran does not teach the stage apparatus of claim 48. While Doran does appear to teach of a first actuator and a second actuator, Doran fails to disclose that the second actuator is arranged to apply a force to the second stage to substantially control acceleration of the second stage when the first actuator moves the first stage along the first axis. Doran does not appear to teach of two actuators acting at the same time. Doran only teaches that actuators positioned between two stages enable rotation, pitch, and yaw adjustments of a fine positioning stage with respect to a coarse positioning stage (Doran, column 6 at lines 57-59). There is no suggestion that such actuators even control acceleration of the fine positioning stage, and, hence, that such actuators control acceleration of the fine positioning stage while a first actuator moves the coarse positioning stage along a first axis. Therefore, claim 48 and its dependents are each believed to be allowable for at least these reasons.

2. *Independent Claim 39 and its dependents*

Claim 39 requires that an actuator which is disposed between a first stage and a second stage applies a force between the first stage and the second stage when a first driving device accelerates the first stage in a first direction. The actuator applies force such that the first stage provides a pulling force on the second stage from a direction of movement of the second stage. When either or both a first speed of the first stage or a second speed of the second stage is constant, a second driving device moves the second stage to position the second stage at a desired position.

On page 3 of the Office Action dated November 9, 2004, the Examiner has acknowledged that Doran does not disclose an actuator disposed between a first stage and a second stage as

claimed. Hence, it appears that the Examiner is admitting that Doran does not teach or suggest an actuator which applies a force between the first stage and the second stage when a first driving device accelerates the first stage in a first direction, and applies force such that the first stage provides a pulling force on the second stage from a direction of movement of the second stage.

However, the Examiner alleges that Asano teaches of such an actuator. It is respectfully submitted that Asano does not teach of an actuator disposed between a first stage and a second stage. Specifically, in the section of Asano cited by the Examiner as teaching of an actuator disposed between a first stage and a second stage (Asano, section 0030), Asano teaches of a spring element. A spring element cannot be considered to be an actuator, particularly an actuator that applies a force to provide a pulling force on a second stage from a direction of movement of the second stage when a first driving device accelerates a first stage in a first direction.

Further, no combination of the cited art teaches of or even reasonably suggests that when either or both a first speed of a first stage and a second speed of a second stage is constant, a second driving device moves the second stage to position the second stage at a desired position. Neither Doran nor Asano even addresses such a limitation. As such, claim 39 and its dependents are each believed to be allowable over the cited art for at least the reasons set forth.

### 3. *Independent Claim 43 and its dependents*

Claim 43 requires that when a first stage accelerates in a first direction along an axis, an actuator accelerates a second stage such that the first stage acts as a pulling force on the second stage from a direction of movement of the second stage. Claim 43 also requires that the second stage is positioned by utilizing a driving device that moves the second stage relative to the first stage when at least one of a first speed of the first stage and a second speed of the second stage is constant. As discussed above with respect to claim 39, Asano does not teach of an actuator that accelerates a second stage. A spring element as taught by Asano is not equivalent to the actuator of claim 43, and does not accelerate a second stage. There is no suggestion that the spring

element accelerates the second stage such that the first stage acts as a pulling force from a direction of movement of the second stage. Additionally, none of the cited art suggests that the second stage is positioned by utilizing a driving device when at least one of a first speed of the first stage and a second speed of the second stage is constant. Therefore, claim 43 and its dependents are believed to be allowable over the art of record for at least this reason.

### Conclusion

For at least the foregoing reasons, the Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8690.

Respectfully submitted,



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